Applicant : Kondejewski, et al.
Serial No. : 09/603,832
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Attorney's Docket No. 16597-004001

AMENDMENTS TO THE CLAIMS

Claims 21-38 are currently pending. Claims 21 and 30 are being amended. After the amendments, claims 21-38 will be pending.

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1.-20. (Canceled)

21. (Currently amended) A coiled-coil polypeptide comprising the formula $(ab_i c_i de_i f_i g_i)_n$, where $i = 1,2,....,n$, and n is at least three, said polypeptide being prepared by

(a) ~~independently inserting an amino acid selected from the group consisting of leucine, isoleucine, valine, phenylalanine, methionine, tyrosine, and derivatives thereof, into each of the a and d positions; and~~

~~(b)~~ selecting a solvent-accessible region of an epitope of a selected natural protein, wherein said region is not in a coiled-coil conformation in its native state, and inserting the amino acids from said region into the b_i, c_i, e_i, f_i and g_i positions; and

(b) independently inserting an amino acid selected from the group consisting of leucine, isoleucine, valine, phenylalanine, methionine, tyrosine, and derivatives thereof, into each of the a and d positions such that the amino acids from the epitope in the b_i, c_i, e_i, f_i and g_i positions are interrupted by the amino acids in the a and d positions;

wherein $(ab_i c_i de_i f_i g_i)_n$, forms a coiled-coil.

22. (Previously presented) The polypeptide of claim 21, wherein a is isoleucine and d is leucine.

23. (Previously presented) The polypeptide of claim 21, wherein the coiled-coil polypeptide is comprised of two polypeptide chains arranged in a parallel configuration.

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24.   (Previously presented) The polypeptide of claim 21, wherein n is between about 3 and about 20.

25.   (Previously presented) The polypeptide of claim 21, wherein n is between about 5 and about 10.

26.   (Previously presented) The polypeptide of claim 21, wherein the epitopes are selected from α-helical surface regions of a cellular prion protein.

27.   (Previously presented) The polypeptide of claim 21, wherein the epitopes are selected from exposed surface regions of an infectious prion protein.

28.   (Previously presented) The polypeptide of claim 26, wherein the sequence formed by the positions $(b_i c_i e_i f_i g_i)_n$ corresponds to the solvent-accessible residues of an epitope having a sequence selected from the group consisting of SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7.

29.   (Previously presented) The polypeptide of claim 26, wherein the cellular prion protein is selected from the group consisting of mouse, hamster, bovine, ovine and human cellular prion proteins.

30.   (Currently amended) A coiled-coil polypeptide, comprising an amino acid sequence represented by $(ab_i c_i de_i f_i g_i)_n$, where

   $i=1,2,....,n$, and n is at least three;

   a and d are amino acids each independently selected from the group consisting of leucine, isoleucine, valine, phenylalanine, methionine, tyrosine, and derivatives thereof;

   $(b_i c_i e_i f_i g_i)_n$ is a sequence of amino acids from a solvent-accessible region of an epitope from a selected natural protein, wherein said region is not in a coiled-coil conformation in

its native state, and the sequence $(b_i c_i e_i f_i g_i)_n$ is interrupted by amino acids a and d in $(ab_i c_i de_i f_i g_i)_n$; and

wherein $(ab_i c_i de_i f_i g_i)_n$ forms a coiled coil.

31.   (Previously presented) The polypeptide of claim 30, wherein a is isoleucine and d is leucine.

32.   (Previously presented) The polypeptide of claim 30, wherein the coiled-coil polypeptide is comprised of two polypeptide chains arranged in a parallel configuration.

33.   (Previously presented) The polypeptide of claim 30, wherein n is between about 3 and about 20.

34.   (Previously presented) The polypeptide of claim 30, wherein n is between about 5 and about 10.

35.   (Previously presented) The polypeptide of claim 30, wherein the epitopes are selected from α-helical surface regions of a cellular prion protein.

36.   (Previously presented) The polypeptide of claim 30, wherein the epitopes are selected from exposed surface regions of an infectious prion protein.

37.   (Previously presented) The polypeptide of claim 35, wherein the sequence formed by the positions $(b_i c_i e_i f_i g_i)_n$ corresponds to the solvent-accessible residues of an epitope having a sequence selected from the group consisting of SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7.

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38.   (Previously presented) The polypeptide of claim 35, wherein the cellular prion protein is selected from the group consisting of mouse, hamster, bovine, ovine and human cellular prion proteins.